Year 6 - Light

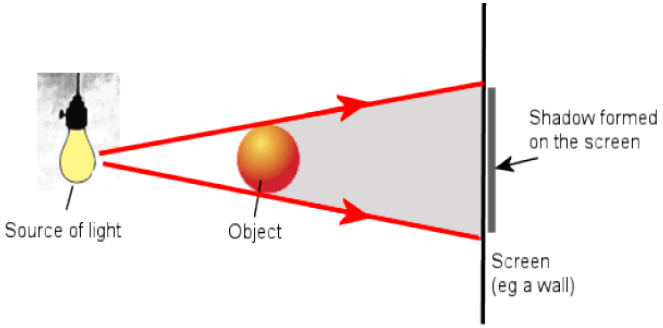
Physics

Key vocabulary

light source	Where light comes from, e.g. a candle, the Sun.
mirror	A shiny surface that reflects light in a regular way.
opaque	Not clear. Blocks all light so that one goes through.
reflect	To throw back or bounce light from a surface.
shadow	A dark shape or outline of something that is made when light is blocked.
transparent	Clear, see-through, lets all light pass through.
translucent	Almost see-through, lets some light pass through but it is scattered.
incident ray	A ray of light that hits a surface,
reflected ray	A ray of light that has bounced back after hitting a surface.
the law of reflection	The law states that the angle of the incident ray is equal to the angle of the reflected ray.
refraction	When light bends as it passes from one medium to another, e.g. from air to water.
visible spectrum	Light that is visible to the human eye. It is made up of a colour spectrum.

How shadows are made

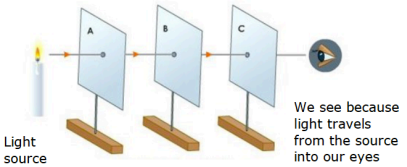
A shadow is always the same shape as the object that casts it. This is because when an opaque object is in the path of light travelling from a light source, it will block the light rays that hit it while the rest of the light can continue to travel.



Shadows can also be elongated or shortened depending on the angle of the light source. A shadow is also larger when the object is closer to the light source. This is because it blocks more of the light.

The nature of light

Light travels in straight lines.
Light can travel through a vacuum (a completely airless space)

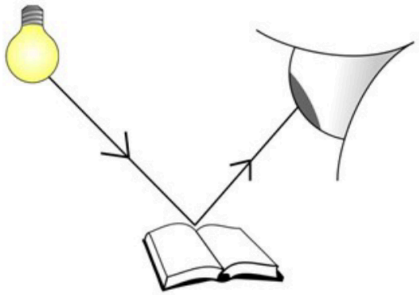


Light can travel very fast at around 300,000km per second.
At this rate, light can travel around the Earth 8 times in 1 second.



Seeing things

For objects that are not a light source, light must be reflected from the object into our eye for us to see the object.



Adventures with light

When light travels through denser materials than air, it slows down and bends. This is called refraction.



White light is really made up of the colours of the rainbow. This can be shown by shining light through a glass prism.

